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their work in the most reckless and wasteful fashion, and are subject to no sort of efficient control.

The district of Nkandhla comprises the long range of mountainous country which forms the watershed between the Umhlatuze and Insuzi rivers. The highest ridge, which attains an altitude of at least 4,500 feet, is called Nomance. The Nkandhla forests are of great extent, and are situated chiefly on the southern slopes of the Nkandhla range. One belt of forest, called the Dukuza, is several miles in length, and takes two hours to traverse on horse-back. Many are of opinion that these forests are finer than those of the Qudeni. They have not suffered at all from the spoilers in the shape of sawyers, but licensed pole-cutting has been going on to some extent on the Nomance ridge. This pole-cutting is very destructive to forests unless the work is carefully supervised by a forest department, and the poles to be cut selected with a view to proper cultural treatment, which has not been the case.

The Entumeni forests are situated on the highlands, which rise to an altitude of 2,800 feet, between the Mhlatuzi and Matikulu rivers. The timber in these forests is inferior to that of the Qudeni and Nkandhla. The Eshowe forests are not very extensive; they grow in patches on sheltered kloofs and hollows, and along water-courses and streams, filling up the valleys. They are most abundant on the eastern and southern slopes of the Eshowe range. They furnish no hard woods of any value.

Next to the Qudeni and Nkandhla, the Ingoye forest is the finest in Zululand. It is situated along and on the southern slopes of the Ingoye range, which forms the watershed between the Mhlatuzana and Mlalazi rivers. It grows at an altitude of from 1,000 to 1,500 feet, and is of great length, extending from ten to twelve miles. It is a virgin forest in the sense that it has never been cut into by sawyers, but the work of denudation by the natives is very apparent, more so than elsewhere. It is evident from the stumps of trees left, and from patches of wood here and there, that the lower slopes of the Ingoye range were formerly clothed with forests to its base, but gradually by the process of cultivation and wattle-cutting the forest line is receding up the mountain. Other patches of forest land are scattered here and there throughout Zululand, but these are the most important forests which call most urgently for some regulation, lest by the joint action of whites and natives they should be to a great extent deteriorated or even destroyed.

BOOK-REVIEWS.

Education and Heredity. By J. M. GUYAN. Tr. by W. J. Greenstreet. (Contemporary Science Series.) New York, Scribner. 12°. \$1.25.

THE title of this book is misleading, there being nothing in it about the relations of education to hereditary tendencies except a brief passage at the end of the second chapter. A large part of the book is devoted to a presentation of the author's peculiar theory of the origin of the moral sentiments, a theory which he evidently deemed of great value, but which seems to us about as worthless as a psychological theory well can be. M. Guyan affirms that the mere power of doing right leads us to do right, or, as he expresses it, "to be inwardly aware that one is capable of doing something greater is *ipso facto* to have the dawning consciousness that it is one's *duty* to do it" (p. 72). Evidently M. Guyan was not much gifted with the philosophical faculty. When, however, he leaves these discussions about the origin of the moral faculty and turns to his proper subject of education, he says many things that are wise and suggestive, though nothing that is really original.

His first point is the importance of moral education, on which he dwells at considerable length, maintaining, in opposition to Ribot and others, that precept and example have a powerful influence on the moral nature, modifying in a marked degree the inborn tendencies of the individual. Physical education, too, is dwelt upon at considerable length, the author fearing the effect of over-study upon the young and especially upon girls. When he comes to treat of intellectual education he takes somewhat different ground from what his scientific proclivities would lead us to expect, putting science in a secondary place, and assigning the

first to the humanities. "We ought," he says, "to place esthetic before intellectual and scientific instruction, because the beautiful lies nearest to the good, and esthetics, art, literature, and what have been so well called the humanities, are the least indirect influences making for morality" (p. 161). The book as a whole, barring the author's strange theory of the moral sense, is a good one, and will doubtless be interesting to educators.

AMONG THE PUBLISHERS.

THE *Illustrated American* for Aug. 1 contains a good portrait of the late Edward Burgess.

—Charles L. Webster & Co. have now ready Mrs. Alexander Ireland's "Life of Jane Welsh Carlyle."

—G. P. Putnam's Sons have just ready in the Story of the Nations series "The Story of Portugal," by H. Morse Stevens.

—The Seegur & Guernsey Co., 7 Bowling Green, New York, will publish at once the "Cyclopædia of the Manufactures and Products of the United States" in a revised and enlarged form.

—In *Outing* for August is an article on "Photographing in the White Mountains," by Ellerslie Wallace, and one on the "Theory and Introduction of Curve Pitching," by O. P. Caylor.

—Howard Lockwood & Co. have just issued Part 2 of their "American Dictionary of Printing and Bookmaking." It extends from Blatt to Chinese Printing, and is, like its predecessor, freely illustrated with technical cuts and with portraits.

—In its August number the *New England Magazine* publishes the "Harvard Commencement Essays." The topics are, "The Harvard Senior," by Henry R. Gledhill; "Edward Rowland Sill," by Charles W. Willard; and "A Remedy for American Philistinism," by Charles Lewis Slattery.

—The August *Babyhood* contains an article on hay-fever by Dr. Samuel Ashhurst, who lays great stress on the importance of counteracting the tendency towards hay-fever in childhood. "Science for Children," in the same number, is an article that contains information as to how to make out-door life at the present season profitable to both mother and child.

—In the *Atlantic Monthly* for August, Olive Thorne Miller, in "Two Little Drummers," treats the yellow-bellied woodpecker (sometimes called the sap-sucker) and the red-headed woodpecker; and Agnes Repplier contributes a paper on "The Oppression of Notes," which will touch a responsive chord in readers who have struggled with foot-notes far too copious and obtrusive.

—"The Press as a News Gatherer" is the subject of a paper by William Henry Smith, manager of the Associated Press, in the August *Century*, and is the first of several separate papers on journalism which are to appear in that periodical. Mr. Smith traces the origin and growth of the Associated Press, and discusses topics of special interest to newspaper editors, as well as to the public.

—John Wiley & Sons are engaged upon the work of getting out Thurston's "Manual of the Steam Engine." The first volume is printed, and will soon appear; the second is in press. The work makes two volumes of about 850 pages each, and is intended for use by engineers generally, as well as by students in the graduated courses directed by its author in Sibley College at Cornell University, and for other technical schools giving attention to such advanced work. Part I. is devoted to the development, structure, and theory of the engine; Part II. to the design, construction, and operation, and to the finance of its application. Part II. also includes a chapter on engine-trials, with special attention to experimental research and the scientific study of the engine. Messrs. Baudry & Cie of Paris have applied for and received the contract for publication of a translation into French, to be issued next year. They have already in hand, and well advanced, a translation of Thurston's "Engine and Boiler Trials," published in America and Great Britain by the Wileys, and which has already passed to a second edition. It is anticipated that the

"Manual" will find a very large sale both in the United States and Europe.

— An American edition of the Rev. J. B. Lock's "Arithmetic for Schools," edited and arranged by Charlotte A. Scott of Bryn Mawr College, has been issued by Macmillan & Co. In this work Mr. Lock has aimed to avoid novelty in method or in arrangement, though it differs in some respects from other works on the same subject. Rules, for instance, are to a great extent entirely omitted, specimen examples fully worked out being given instead, the theory, concisely stated, being set forth in large type, and the illustrations and explanations in smaller type. The examples are numerous and well graded.

— The August *Magazine of American History* is a rich midsummer number. It opens with the first part of an article on "The Spartans of Paris," by General Meredith Read, illustrated with portraits of literary celebrities of France. A picture of the editor and author, M. Arsène Houssaye, forms the frontispiece to the number. "The Fifteenth State," by John L. Heaton, gives information in relation to the settlement of Kentucky, showing how the mountain barriers were passed, and that a race-course was established in 1775, so early that one man was shot by Indians while speeding his horse upon it. "The Beginnings of the City of St. Joseph," by Judge William A. Wood, is an account of the founding of that city less than half a century ago. It contains an amusing picture of the first post-office there, in 1841, which was

an old hat. The fourth paper of the number, entitled "The Right Reverend Samuel Provoost, first Bishop of New York," by Rev. Isaac S. Hartley, is a study, not only of the varied work of the subject, but of the exciting times in which he lived. "A Character Sketch of Mr. Gladstone," by Hon. J. L. M. Curry, will attract every reader. A paper follows on "Governor Meriwether Lewis," the explorer of the western part of the continent, contributed by General Marcus J. Wright of Washington. Other articles include "The Bewitched Children of Salem, 1692," by Caroline E. Upham; "The Royal Couple of Roumania;" "Archæology in Missouri," by O. W. Collett; and "The Four New York or Senior Regiments of Troops in 1775."

— "Lessons in Astronomy," by Professor Charles A. Young (Boston, Ginn & Co.), has been prepared to meet the wants of certain classes of schools which find the same author's "Elements in Astronomy" too extended and mathematical to suit their course and pupils. It is based upon the last-named work, but with many condensations, simplifications, and changes of arrangement. One of the principal changes is the placing of the uranography, or "constellation-tracing," in the body of the text, near the beginning, and supplementing it with brief notes on the mythology of the constellations.

— Ginn & Co. have in press the first volume of Bacon's "Advancement of Learning," edited by Prof. A. S. Cook of Yale. In this edition the quotations from the ancient tongues are all rele-

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— The American Book Company have just issued "Elements of Civil Government," by Alexander L. Peterman. It is a small book, intended for the use of schools, and as it attempts to deal with the whole subject of American government, federal, State, and municipal, the treatment is necessarily brief and somewhat superficial. The descriptive portions, however, are quite good, and the work is not encumbered, as so many such books are, with a mass of irrelevant historical matter. It opens with an account of government in the family and in the school, which can hardly

be called civil government, and then proceeds to treat successively of the town, county, city, and State, and of the United States. To our mind this is a wrong method of procedure, the State being the foundation of civil order, and therefore requiring to be treated first; while the towns and counties, being mere agents of the State, should be passed over with slight notice. Mr. Peterman fails, too, as most writers of such treatises do, to give a clear idea of what government is for, and why we are bound to obey it. The work is faulty also in reviving the old fiction of a social contract as the basis of civil society; and in general the theoretical parts of the book are inferior to the descriptive. It will serve, however as an introduction to the subject, which can afterwards be pursued in more philosophical treatises.

— D. C. Jackson, electrical engineer in charge of the central district of the Edison General Electric Company, with headquarters at Chicago, has accepted the chair of electrical engineering in the University of Wisconsin.

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